

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A mobile communication system, comprising:
~~having a function of~~ means for delivering data of an identical service to a plurality of radio terminals[[],]; and

a radio network controller that receives a unique indicator assigned to a group consisting of the plurality of radio terminals from the means for delivering data of the identical service, and that provides a paging message to each of the plurality of radio terminals within the group with an identifier corresponding to the unique indicator,

wherein the means for delivering data delivers the paging message to said each of the plurality of radio terminals using the identifier corresponding to the unique indicator, and

wherein the paging message includes information for paging with respect to [[a]] each of the radio terminal terminals in the group[[],] which ~~receives~~ receive delivery of the service, ~~is generated using~~ based on identification information peculiar to the service.

2. (Currently Amended) The mobile communication system according to claim 1,

wherein the information for paging includes a downlink common channel, which sends [[a]] the paging message, and a paging indicator channel, which accompanies the downlink common channel and sends information indicating presence or absence of an incoming call with respect to a radio terminal receiving delivery of the service, and

the information indicating presence or absence of an incoming call and transmission timing of the information are generated according to identification information peculiar to the service.

3. (Currently Amended) The mobile communication system according to claim 2,

wherein the identification information peculiar to the service is superimposed on an indication bit for a paging group (~~incoming call group~~) indicating presence or absence of a voice incoming call in the paging indicator channel.

4. (Currently Amended) The ~~moving~~ mobile communication ~~channel~~ system according to claim 1,

wherein the information peculiar to the service is notified to said radio ~~terminal~~ terminals in said group receiving the service, and said radio ~~terminal~~ terminals in said group receives the information for paging on the basis of the information peculiar to the service.

5. – 7. (Canceled).

8. (Currently Amended) The ~~radio network controller~~ mobile communication system according to claim ~~[[6]]~~ 3,

wherein the information indicating presence or absence of ~~[[an]]~~ voice incoming call (Paging Indicator: PI) is determined according to the following expression:

$$PI = (DRXindex) \bmod (N_p),$$

$$DRXindex = (TMGI) \bmod (8192),$$

$$N_p = (18, 36, 72, 144),$$

TMGI = Temporary Mobile Group Identify (the identification information peculiar to the service).

9. (Currently Amended) The radio network controller according to claim ~~[[6]]~~ 1,

wherein the information for paging includes transmission timing of the information,

wherein the transmission timing (Paging Occasion: PO) is determined according to the following expression:

$$PO = \{ \{ (TMGI) \bmod (K) \} \bmod \{ (DRX \text{ cycle length}) \bmod (PBP) \} \} * PBP + n * (DRX \text{ cycle length}) + \text{Frame Offset},$$

TMGI = Temporary Mobile Group Identify (the identification information peculiar to the service),

K: the number of existing paging channels,
DRX (Discontinuous Reception) cycle length: a period for receiving
the paging indicator channel,
PBP: Paging Block Periodicity,
n: an integer including zero (up to a maximum number of an SFN
(Serial Frame Number)).

10. (Currently Amended) ~~[[A]]~~ An operation control method for a radio network controller in a mobile communication system having a function of delivering data of an identical service to a plurality of radio terminals, the method comprising:
~~a step of generating information for paging with respect to a radio terminal, which receives delivery of the service, using identification information peculiar to the service~~
delivering data of an identical service to the plurality of radio terminals;
receiving, by the radio network controller, a unique indicator assigned to a group consisting of the plurality of radio network terminals; and
providing a paging message to each of the plurality of radio terminals within the group with an identifier corresponding to the unique identifier,
wherein the paging message is delivered to said each of the plurality of radio terminals using the identifier corresponding to the unique indicator, and
wherein the paging message includes information for paging with respect to each of the radio terminals in the group which receive delivery of the service, based on identification information peculiar to the service.

11. (Original) The operation control method according to claim 10,
wherein the information for paging includes a downlink common channel,
which sends a paging message, and a paging indicator channel, which accompanies the
downlink common channel and sends information indicating presence or absence of an
incoming call with respect to a radio terminal receiving delivery of the service, and
said step generates the information indicating presence or absence of an
incoming call and transmission timing of the information according to identification
information peculiar to the service.

12. (Original) The operation control method according to claim 11,
wherein the identification information peculiar to the service is superimposed
on an indication bit for a paging group (incoming call group) indicating presence or absence
of a voice incoming call in the paging indicator channel.

13. (Currently Amended) The operation control method according to claim 11,
wherein the information indicating presence or absence of an incoming call
(Paging Indicator: PI) is determined according to the following expression:

$$PI = (DRXindex) \bmod (N_p),$$

$$DRXindex = (TMGI) \bmod (8192),$$

$$N_p = (18, 36, 72, 144),$$

TMGI = Temporary Mobile Group Identify (the identification information
peculiar to the service).

14. (Currently Amended) The operation control method according to claim 11,
wherein the transmission timing (Paging Occasion: PO) is determined according to the
following expression:

$$PO = [\{ (TMGI) \bmod (K) \} \bmod \{ (DRX \text{ cycle length}) \bmod (PBP) \}] * PBP + n * (DRX \text{ cycle length}) + \text{Frame Offset},$$

TMGI = Temporary Mobile Group Identify (the identification information
peculiar to the service),

K: the number of existing paging channels,

DRX (Discontinuous Reception) cycle length: a period for receiving the
paging indicator channel,

PBP: Paging Block Periodicity,

n: an integer including zero (up to a maximum number of an SFN (Serial
Frame Number)).

15. – 16. (Canceled).

17. (New) A method of delivering paging signals in a mobile communication
system, comprising:

assigning, by a broadcast multicast service center, a temporary mobile group identifier as a unique value to each of a plurality of radio terminals assigned to a particular group of radio terminals;

receiving, by the broadcast multicast service center, a request from another radio terminal to be included in the particular group of radio terminals;

outputting the request from the another radio terminal from the broadcast multicast service center to a radio network controller;

receiving, by the radio network controller, a paging message to be provided to at least one of the plurality of radio terminals in the particular group of radio terminals;

outputting the paging message from the radio network controller to the broadcast multicast service center with an identifier that corresponds to the temporary mobile group identifier for the particular group of radio terminals; and

outputting, by the broadcast multicast service center to each of the plurality of radio terminals in the particular group of radio terminals, the paging message together with the temporary mobile group identifier.

18. (New) The mobile communication system according to claim 1, wherein the paging message sent to each of the radio terminals in the group does not include any information used to uniquely identify any of the radio terminals in the group.